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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,725	01/11/2002	Gerald Tablada Caneba	1992.VIN	4004
7590	07/22/2004		EXAMINER	
Thomas F. Roland			ZALUKAEVA, TATYANA	
NATIONAL STARCH AND CHEMICAL COMPANY			ART UNIT	PAPER NUMBER
P.O. Box 6500			1713	
Bridgewater, NJ 08807-0500				

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/045,725	CANEBA ET AL.	
	Examiner	Art Unit	
	Tatyana Zalukaeva	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 June 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-4,8 and 15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4,8 and 15 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/10/2004 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 4 and 8 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Menzies et al (U.S. 6,410,464). Menzies discloses styrenic rubbers, which are tapered copolymers (col.5, lines 1,2) as pressure sensitive adhesives. A preferred pressure sensitive adhesive is a copolymer of isooctyl acrylate and acrylic acid in the ratio of 94/6 by weight. Therefore, Menzies anticipates the polymer, its nature relative monomer ratios, and characteristics of the instant claim 1.

With regard to the "free radical polymerization method", as presently amended, it is noted that in the product-by-process claims the patentability is defined by the product, not by the process, unless it is shown that the process as claimed produces the product different from that of the prior art. In the instant case there is no evidence, or no reason to believe that the process of polymerization as instantly claimed produces a different

product, that of a polymerization of Menzies consult In re Thorpe, 227 USPQ 964 (CAFC 1985).

The rejection of claim 8 is made in the sense of Fitzgerald (205 USPQ 594). (CAFC) based on presumption that the properties governing the claimed copolymers if not taught, may be very well met by the copolymers of Menzies, since the copolymers of Menzies are essentially the same as applicants' copolymers, and the burden to show that it is not the case is shifted to applicants; or in the sense of In re Spada, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990), which settles that when the claimed compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art.

4. Claims 1-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al (U.S. 6,455,133).

Furukawa discloses styrenic resin sheet made of a styrene/vinyl monomer copolymer (col.2, lines 59, 60). Copolymerizable vinyl monomers are provided in col.3, lines 5-20 and include the comonomers of the instant claims, such as methacrylic acid, specifically styrene-methacrylic acid copolymer is identified in col.3, line 23, and it is further emphasized that the copolymers can be tapered block copolymers (see col.3, line 34).

Furukawa does not teach the weight ratio of acrylic acid and styrene copolymer, however, since he suggests the tapered block copolymer, that means he suggests the method of making it, such as retrograde polymerization. Furthermore, relative amounts of monomers in a copolymer depend on relative reactivities of comonomers, so called

"copolymerization constants", these copolymerization constants being reference values for each pair of comonomers and they mainly define the relative amounts of comonomers in a copolymer. Therefore, a person skilled in the art would have found obvious to perform retrograde polymerization to obtain the suggested tapered block copolymers, and to adjust the conditions in order to obtain the claimed ratios, lacking showing criticality of the claimed ratios on this record.

The rejection of claim 8 is also made in the sense of *In re Fitzgerald*, as discussed above.

5. Claims 1-4, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fryd et al (U.S. 5,708,102), in view of Matyjaszewski et al (U.S. 5,807,937).

Fryd discloses living free radical polymerization for forming block polymers (abstract). Example 7 in col. 20 provides for a block copolymer of methyl acrylate and acrylic acid, wherein the amount of acrylic acid units is within the claimed range. The process is living free radical polymerization process. The Mw and Mn are both within the claimed range. The polydispersity is low.

Fryd does not specifically recognize that the block polymers are tapered (or gradient or graded - synonyms-T.Z.) block copolymers. .

Matyjaszewski discloses living (ATRP) process. The process of Matyjaszewski results in end-functional, site-specific functional and telechelic homopolymers and copolymers; block, random, graft, alternating and tapered (or "gradient") copolymers which may have certain properties or a certain novel structure; star, comb

and "hyperbranched" polymers and copolymers (abstract). Among preferred polymers Matyjaszewski identifies acrylic acid and vinyl acetate.

Therefore, based on the similarity of the processes utilized by Fryd and Matyjaszewski, on essentially the same comonomers and their ratios, as well as on the statement that both produce block copolymers, one skilled in the art will have found obvious that the process of Fryd will be capable of producing tapered polymers, as taught by Matyjaszewski with the reasonable expectation of success.

It will be also found obvious by a skilled artisan to employ the comonomers generically taught by Matyjaszewski, i.e. acrylic acid and vinyl acetate in the production of tapered block copolymers, in lieu of methyl acrylate of Fryd and thus to arrive at the instant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
Art Unit 1713

July 19, 2004

